

GEF PACIFIC
RIDGE TO REEF PROGRAMME

SOLOMON ISLANDS



NATIONAL R2R PROGRAMME
DOCUMENT



Communauté
du Pacifique



GEF Pacific RIDGE TO REEF Programme

Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries

FOREWORD

The Heads of States of 13 Pacific SIDS developed and in 1997 endorsed a GEF International Waters Strategic Action Programme (SAP) for Pacific Island Countries. That document identified priority areas for action in the international waters focal area as improved management of ocean and coastal fisheries, integrated watershed and coastal management, and water supply protection. On the basis of the Pacific SAP, the GEF International Waters focal area has subsequently invested in a series of regional initiatives. The first was the UNDP implemented project entitled “Implementation of the Strategic Action Program for the International Waters of the Pacific Small Island Developing States” initiated in 2000 and operated over almost 7 years to 2006.

In light of the critical water resource and sanitation issues facing Pacific SIDS, GEF support in the years following the conclusion of the IWP project has been targeted at improved coordination and planning of water resource and wastewater management to balance overuse and conflicting uses of scarce freshwater resources through the GEF Pacific IWRM Project. The latter was financed by the GEF, implemented by UNDP and UNEP, and executed regionally by the Geoscience Division of the Pacific Community (SPC) in partnership with 14 Pacific Island Countries.

The GEF Pacific IWRM Project built on achievements of previous investments via a focus on national IWRM demonstration projects aimed at providing an opportunity for participating countries to implement, and experiment with, new management models and methods. The practical on-the-ground solutions to water and sanitation issues demonstrated by the national IWRM projects acted to stimulate support at both community and national government levels for policy reform and the mainstreaming of integrated approaches as part of national sustainable development planning.

The experience and local capacity in integrated environmental and natural resource management generated through the GEF Pacific IWRM project has been recognized both regionally and within the 14 participating Pacific Island Countries as an appropriate entry point for the testing of innovative approaches and measures to integrate land, forest, water and coastal management, including climate change adaptation in Pacific SIDS. In this connection, the GEF multi-focal area, multi-GEF agency programme entitled “Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods” (or the GEF Pacific R2R Programme) was developed to provide an opportunity for Pacific SIDS to develop and implement truly integrated approaches for the sustainable development of island economies and communities. Programme activities are organised under the following programme components:

- ✓ National Multi-Focal Area Ridge-to-Reef Demonstrations in all Pacific Island Countries
- ✓ Improved Governance for Integrated, Climate Resilient Land, Water, Forest and Coastal Management
- ✓ Regional and National/Local Ridge-to-Reef Indicators, Monitoring and Evaluation and Knowledge Management
- ✓ Regional Programme Coordination

This National Programme Document summarizes the development of integrated approaches to water resource and coastal management in Solomon Islands to date, including examples of specific results and lessons learned achieved through integrated approaches to environmental and natural resource management. Importantly, this document presents information about the interlinked GEF R2R STAR and GEF International Waters R2R Projects, including programme support activities which focus on science-based planning, human capital development, policy and strategic planning, results-based management, and knowledge sharing.

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INTRODUCTION

Given the close inter-connections between land, water and coastal systems in Small Island Developing States (SIDS), the integration of freshwater watershed management with coastal area management is considered essential to foster effective cross-sectoral coordination in the planning and management of land, water and coastal uses.

In Pacific SIDS, such integrated approaches to freshwater and coastal area management have been termed 'Ridge to Reef' to emphasise the inter-connections between the natural and social systems from the mountain 'ridges' of volcanic islands, through coastal watersheds and habitats, and across coastal lagoons to the fringing 'reef' environments associated with most Pacific SIDS.

Inherent in the approach is the philosophy of cross-sectoral coordination in the planning and management of freshwater use, sanitation, wastewater treatment and pollution control, sustainable land use and forestry practices, balancing coastal livelihoods and biodiversity conservation, hazard risk reduction, and climate variability and change.

Similarly, the integration of communities, stakeholders, and national governments within such a cross-sectoral planning framework is described by Pacific SIDS as a 'Community to Cabinet' approach.

The following sections summarize achievements to date in the development of 'Ridge to Reef' and 'Community to Cabinet' approaches to integrated natural resource and environmental management in Solomon Islands. An overview of the purpose of the Ridge to Reef Programme, its GEF R2R STAR Projects and GEF International Waters Projects is also provided.



1. RIDGE TO REEF CONTEXT

This section provides a brief background of the geography and environmental threats in Solomon Islands. This information has been used as the basis for the identification of priority activities for the testing of 'Ridge to Reef' approaches to integrated land, water, forest and coastal management in Solomon Islands.



2. COMMUNITY TO CABINET APPROACH

Community to Cabinet is a multi-stakeholder approach adopted in the Pacific Small Island Developing States to foster strengthened coordination and stakeholder involvement in the planning of investments in integrated natural resource and environmental management. This section outlines existing mechanisms for 'Community to Cabinet' coordination in Solomon Islands.



3. RIDGE TO REEF RESULTS

Pacific leaders have called for a strengthened emphasis in results-oriented sustainable development planning. This section benchmarks the main results of efforts to develop integrated management approaches in Solomon Islands to date.



4. DOING IS SEEING THE NEED

The GEF Pacific Ridge to Reef programme embraces the 'Doing is Seeing the Need' philosophy adopted by the GEF Pacific R2R Programme. A story board of images is presented to provide examples of best practices in integrated natural resource and environmental management.



5. LESSONS FROM INTEGRATION

Human resources are central to the sustainable development of Pacific SIDS. This section presents experiences and lessons learned in integrated management by practitioners and stakeholders. The focus of these lessons is on the capacity built for integrated management and the related results.



6. GEF PACIFIC R2R PROGRAMME

An overview of the "Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods" (or GEF Pacific R2R Programme) is provided in this section. Information about the interlinked GEF R2R STAR and GEF International Waters R2R Projects, and Programme Coordination Unit, is also presented.



7. INTERNATIONAL WATERS R2R PROJECT

Priority actions identified for testing the integration of water, land, forest and coastal management to preserve ecosystem services, store carbon, improve climate resilience and sustain livelihoods in Solomon Islands are outlined. A brief strategy for Solomon Islands IW R2R national pilot project is provided along with the logical framework matrix. Key assumptions and risks are summarized to guide planning during the project's inception period.

1. RIDGE TO REEF CONTEXT



Country:	Solomon Islands
Size:	28,450 km ²
Population:	549,598
Population growth:	2.1%
Density:	19.23/km ²
GDP:	USD 838 million
Growth Rate:	10.7%
Gross National Income:	USD 4,335

The Solomon Islands are an archipelago of approximately 1000 scattered islands in the Melanesian group of the western Pacific. The islands are mostly rugged and mountainous with some low-lying coral atolls. With a population of nearly 600,000 the bulk of the population are dependent on subsistence agriculture, fishing and forestry.

Water resources availability in Solomon Islands varies considerably. It ranges from sizeable rivers to small streams from a high mountainous and dense rainforest islands to rainwater harvesting and thin fresh water lens of underground aquifers of the small low-lying atolls and islets. In 1986, flooding claimed about 100 lives. In 1995, drought severely affected most parts of the country causing severe food shortages.

Improper development practices such as logging and the traditional slash-and-burn method of farming have gradually destroyed the quality and capacity of rivers and streams, threatening the availability water to many parts of the country. With the increase in population, underground water sources are under threat due to human activities, saltwater intrusion and sea-level rise.

From years of civil instability and economic collapse the Solomon Islands face many environmental challenges as they relate to water resources. Security of supply due to deteriorating water quality and reducing quantity from insufficient storage, leakage, in-efficiency and climate variability/changes are increasingly evident. Most water supplies have run-off type systems where small intakes are built at streams. The absence of dams (reservoirs) does not capture water during the wet seasons to supply during the drier periods. Groundwater resources sometimes supplement the supply but at a higher pumping cost.

The lack of effective liquid and solid waste management due pressure from urban planning and uncontrolled developments is exacerbated by the lack of maintenance of sewer infrastructure, no proper sewerage treatment and regulatory compliances results in raw sewerage disposals directly to rivers and coastal areas.

Governance issues are those of fragmented institutional arrangements that come with fragmented responsibilities with water resources and sanitation funding, development and management. Given the fragmented responsibilities, coordination continues to be a challenge across sectors.

Additionally there is inadequate and outdated governance framework that prevents integration between all sectors for water and sanitation development. However, there are good examples of specific management plans under revised legislation that can be adopted for the WATSAN sector.

The human resources needed to effectively deliver water and sanitation developments continue to impede the work-plans of responsible sectors. Staff recruitment is restricted to budgetary allocations resulting in a freeze of recruitment while staff development plans (SDPs) lack future visions for developing capacity in the water and sanitation fields at professional levels.

The land tenure system in Solomon Islands is such that most land is customary-owned. Land is divided according to each clan and family and consent must be obtained before accessing or entering into development. Water resources is therefore tied to land. This makes it difficult to distinguish between land and water ownership. To date landowners use water as a means to negotiate with water authorities and government when it comes to water supply payments – whether water is state-owned is a governance issue yet to be settled.

The above issues have begun to be addressed through the cross-sectoral planning and management initiatives of the GEF Pacific IWRM Project. Needs still exist and have been identified within a Ridge to Reef context.

These include establishing a monitoring programme for pollution and nutrients entering Honiara Adjacent Coastal water; identifying pollution and nutrient sources and environmental impact and; establishing institutional and Civil Society awareness and capacity outreach.

2. COMMUNITY TO CABINET APPROACH

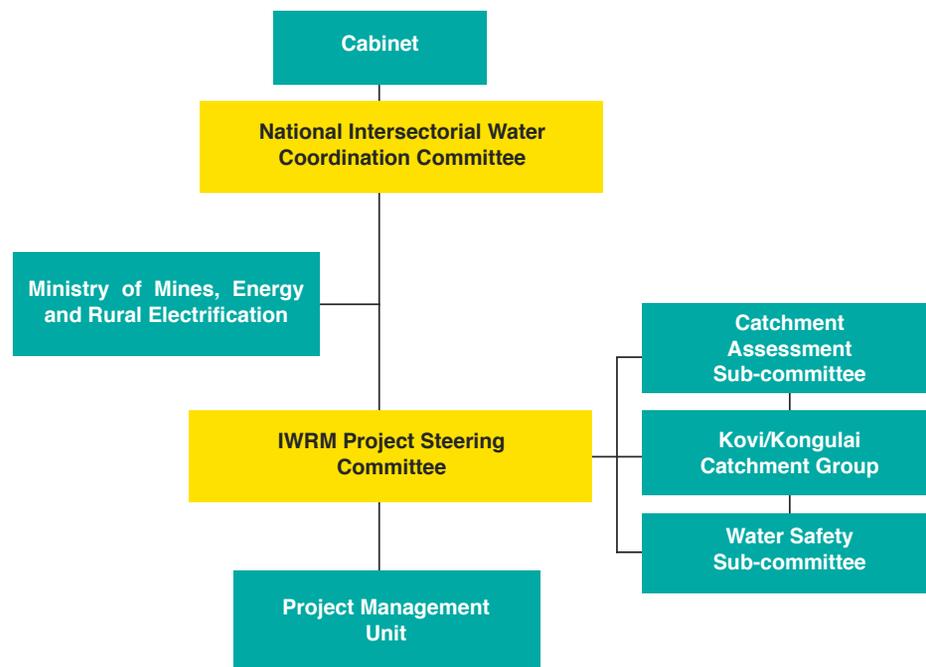
There is a growing recognition in the Pacific region of the need for partnerships, alignment of donor support with national priorities, and country ownership in the development of results-oriented programs and projects. The Pacific leaders recently emphasized these needs noting the well-known challenges Pacific Island communities face in fashioning sustainable futures. These include geographical isolation, high levels of dependence on natural resources for nutritional security and livelihoods, and a highly variable environment characterized by numerous coastal hazards.

The above combined with considerable variation in island geomorphology, socio-economics and politics make locally-driven solutions to key issues influencing island sustainability and resilience a necessity. Of particular note are the complex land and marine tenure systems and institutional relationships between national and community-based governance structures. While the Pacific SIDS have largely adopted western-style constitutions and legal systems, such community-based governance and leadership arrangements remain highly influential at all levels. Accordingly, the participation of civil society organizations and community leaders in development planning is essential to increase the local relevance of management actions and their results in SIDS. The following outlines existing cross sectoral coordination arrangements and efforts to engage stakeholders in sustainable development planning.

Strengthening Cross-sectoral Coordination and Planning

National IWRM planning required the establishment of a National APEX Body to facilitate policy development. In 2009 consultations were held to set up a national inter-sectoral committee to coordinate the IWRM Planning process; a proposed National Inter-sectoral Water Coordinating Committee (NIWCC) was set up. The NIWCC had a Terms of Reference upon which to establish and work from and membership was a representation of government, NGO's and civil society. The NIWCC was the overall steering body that gave advice on policies, plans and legislation and recommend actions that related to water, sanitation and the environment, consulting with and advising to government.

Cabinet endorsed the NIWCC in 2012. The NIWCC in September 2013, facilitated by an international consultant, produced the draft National IWRM Policy and Plan. Additionally, the proposed Water Resources Legislation was considered and recommended for tabling as a Bill to Parliament. In 2013 the NIWCC formulated the national Water Resources and Sanitation Policy and its corresponding implementation Plan for endorsement by Cabinet. The WATSAN policy and plan was formulated as a result of lessons learnt from the IWRM project and also reviewing past work already completed by the various committees and projects.



National governance arrangements are shown for the water sector.
National committees are highlighted in yellow

Linking Local and National Coordination

The Project Steering Committee (PSC) was established in 2010 and comprised of 15 members from government and civil society, land owners and an NGO. The establishment of the PSC was the precursor to the establishment of the NIWCC. To increase community engagement in the GEF Pacific IWRM Project the Kovi/Kongulai Catchment Group (KKCG) was established in 2010. It comprised of 15 members, two of which were also on the PSC.

The PSC during the course of the project further established sub-committees to oversee specific activities including a catchment assessment sub-committee, water safety sub-committee and the Kovi/Kongulai Catchment Group who worked closely with the PMU throughout implementation. With the establishment of a NIWCC in 2012 the PCU reported to the National Committee and provided input into national water activities.

- Solomon Islands Water Authority (SIWA)
- Kovi & Kongulai Communities (Landowners)
- Environmental Health Divisions (Honiara City Council & National Public Health Laboratory)
- Water Resources Division (Mines & Energy)
- Environment & Conservation Div. (MECDM)
- Meteorological Services Div. (MECDM)
- Climate Change Div. (MECDM)
- Forestry Resources Management (MF&R)
- Ministry of Land & Housing (ML&H)
- Geological Survey Div. (MMERE)
- Agriculture Research Div. (MAL)
- Women Development Div. (MWYCA)
- Live & Learn Education (SI) NGO
- SI College of Higher Education (SICHE)

Stakeholder Engagement

Solomon Island's national pilot project of the regional R2R IW project will work to: generate local and national support for integrated R2R approaches; establish linkages, synergies and mechanisms for learning exchange, particularly between and among community leaders and project stakeholders of the national GEF System for Transparent Allocation of Resources (STAR) projects planned under the broader Ridge to Reef programme; develop local experience in linking IWRM to coastal area management; and stimulate cross-sectoral participation in the planning of coordinated investments in land, forest, water and coastal management in the participating countries. Given the range of stakeholders identified above, the preparation phase of the regional R2R IW project in Solomon Islands has been based on a consultative process involving national government agencies, community representatives, and civil society organizations. Stakeholder inputs elicited during the preparation phase have been incorporated in the results framework for the pilot project included in the final section of this document.

3. RIDGE TO REEF RESULTS

The need for results-based approaches to the management of development assistance programmes and projects has received recent high-level recognition. In adopting the Paris Declaration on Aid Effectiveness in 2005, national government Ministers responsible for development from both developed and developing countries joined with Heads of multilateral and bilateral development institutions in committing to “work together in a participatory approach to strengthen country capacities and demand for results-based management”.

This commitment was reaffirmed in the 2008 Accra Agenda for Action which called for accelerated progress on aid effectiveness by better demonstrating the results of development efforts and openly accounting for them. The Pacific Islands region and its development partners have responded accordingly. For example, in 2012 the Pacific Leaders considered a review of the effectiveness of development efforts in the Pacific and called for strengthened emphasis on results in planning and financing development. The following benchmarks the main results of efforts to develop integrated management approaches in Solomon Islands to date.

PROCESS

Multi sectoral APEX body established

The establishment of the Project Steering Committee (PSC) was the precursor to the establishment of a National Intersectoral Water Coordinating Committee (NIWCC). The NIWCC had a Terms of Reference upon which to establish and work from. Membership was a representation of government, NGO's and civil society. This was the platform for dialogue and coordination of IWRM planning and implementation advice and recommendations. The NIWCC was endorsed by Cabinet in 2012. The NIWCC, facilitated by an international consultant produced the draft National IWRM Policy and a Plan in September 2013.

Honiara Water Safety Plan developed

The Water Safety Planning Sub-Committee for the project undertook necessary training to complete water systems assessment that formed the basis of the WSP. These system descriptions and hazard/risks assessments were completed for all water sources. A draft WSP document was completed led by SIWA with inputs from the WSP sub-committee.

Increase in community engagement with national government on water related issues

Increased engagement was achieved with the establishment of the Kovi/Kongulai Community Group (KKCG) and active response to workshops and meetings. The project had the opportunity to talk with the KKCG at every gathering commencing from the time of consent to enter their land until the launching of an Eco-tourism Plan for the community. Although men were represented more, women did take part and shared their views and opinion during each meeting.

Increased proportion of community engaged in water related issues

Communities from Kovi and Kongulai were involved in workshops to gauge the people's perspective on how they interact with land and water from this important catchment; it supplies about 60% of Honiara's water supply. This culminated to a series of assessments with them to show them the value of land and water resources of which they are custodians hence the need to protect.

Facilitated by the Women Development Division and Honiara City Council, women from selected church and NGOs in Honiara took part in workshops on water demand management and water use efficiency at household level.

Awareness information to water consumers was distributed to water provider (SIWA) and during important national and international events. The on-going dissemination of information on importance of water sources, water use efficiency, demand management and water safety were part of mass media project campaigns.

Best IWRM and Water Use Efficiency approaches defined

As part of the Regional Action Plan (RAP) 1999, countries were chosen to formulate a new Water & Sanitation Outlook of which Solomon Islands was one. Formulation of the National Water Outlook (NWO) 2011 was completed with the help of a Professional Intern through the IWC's IWRM Masters Program. The NWO 2011 was a result of discussions and endorsement by the interim NIWCC (mostly PSC members) over a three month period.

Past projects regarding WUE and WDM were carried out to some extent. The IWRM Project in this case further considered the gaps in past projects and targeted additional zones. The project also took into account water safety as part of the project

intervention. In early 2012 the Project worked with the water provider (SIWA) to implement WUE/WDM at one its highest leakage zones in Honiara, Mbokonavera 1-4 residential area. Using past reports a leakage detection program was planned and completed. Funds were allocated to SIWA for this activity.

National staff across institutions with IWRM knowledge and experience

A Leakage Detection Team was established and on-going capacity training was part of the project's intervention. Additional recruitment by SIWA was put in place to increase the number of staff while previous trainees gained the confidence to carry out leak detection activities and further train new staff under the Leakage Detection Team.

Personnel from SIWA and Environmental health participated in Water Safety Plan assessment training. Staff became confident in describing the water supply distribution systems and identifying the hazards and risks associated with the supply from source to consumer. Participants also included members of the water safety sub-committee who produced systems descriptions and completed hazards/risks identification assessments for Honiara City's water supply critical points.

Additional funding from another donor resulted in staff from the Water Resources Division, Ministry of Mines and Energy completing a postgraduate qualification in IWRM from the International Water Centre (IWC), Brisbane, Australia. This raised the number of qualified staff in the water resources sector.

Plans to introduce IWRM as part of program at tertiary level at the national scale was also made in 2012 through the Solomon Islands National University (former SICHE). The curriculum panel, to which the Ministry is a member, included IWRM as part of a proposed Diploma course in Climate Change and Resources Management once approved by the University Board.

Lessons learned incorporated into other national regulations

The coordination of the Kovi Kongulai Catchment Committee enhanced the understanding of the need to establish a management mechanism with a constitution or terms of reference for implementing plans or project such as the IWRM. Through this experience efforts were made to assist identification of donors and resource personnel for the implementation of the new Eco-tourism Plan.

Additionally, the IWRM concept was being used as the approach to prepare a project proposal on water sector adaptation to the impacts of climate change and variability at national level for six sites. As a prerequisite, the IWRM approach was incorporated into the full project document and implemented upon approval of the project.

STRESS REDUCTION

Increased population with access to safe water supply

Water Use Efficiency & Demand Management:

Leakages Detection: Much of the water supply in Honiara is lost through high levels of leakage. Two night flow step tests confirmed very high leakages in both distribution and service lines within the pilot areas.

A total of 414 connections were identified and confirmed in the project area. Only 33% of the connections were found to have operational water meters while the remaining 67% are suspicious; 21% buried or unidentified, 22% are direct lines, 15% disconnected, 4% vacant and 4% are illegal connections.

It was found that out of 8 zones that were isolated with valves, three priority areas have leakages of more than 100 litres per minute.

A total of up to 500m of distribution pipes of distribution pipeline at Kaibia, part of the Mbokonavera zone was located as producing the highest leakage on the distribution system.

These old galvanized pipes have been replaced with high pressure PVC pipes. Additionally new water meters at residential homes and those with no meters and illegal connections have been installed in the pilot areas.

Follow up step test at these sites, now designated as demand management areas (DMAs) were established. SIWA uses the DMAs as permanent sites to continually monitor water flow in distribution pipelines and determine fluctuations associated with daily water use, leakages and illegal connections.

WUE and WDM:

Increased water supply hours and pressure:

In high elevation areas of Skyline Ridge and Tehamurina, water hours have been increased from between 5 and 9 to 15 hours a day.

Low-lying areas at Mbokonavera have been increased from 10 to 19 hours a day through a combination of reduction in leaks and increased pressure. Indirectly non revenue water (NRW) was reduced as a result of installation of new meters for non-operational and non-registered consumers.

Water Safety Plan: Water Quality Monitoring

Through weekly sampling of water supply sources and consumer taps, the Environmental Health Division and Public Health Lab monitor both chemical and microbiological status of water supply to confirm SIWA's weekly disinfection program under the Environmental Health Act and Regulations.

From a regulatory perspective, SIWA is notified of all days, sampling points and the presence, if any, of total coliforms and e.coli in tap water to ensure timely corrective actions are taken.

4. DOING IS SEEING THE NEED

The GEF Pacific IWRM project acted as a valuable entry point for strengthening integrated approaches to natural resource management in Pacific SIDS.

Existing national coordination mechanisms involving operation of inter-linked national APEX bodies for IWRM and local coordinating committees for IWRM demonstration projects have been effective in guiding stress reduction in the water and sanitation sector and driving reform of national IWRM policy and planning.

That project also acted as a valuable entry point for capacity development, helping to foster application of inter-disciplinary skills and local knowledge and integrating this into monitoring and evaluation to ensure that causes of environmental stresses and the results of interventions are understood by stakeholders.

A need exists, however, to scale up the GEF Pacific IWRM approach to strengthen the integration of land, water and coastal management to better accommodate issues associated with biodiversity conservation, to build on synergies between investments in IWRM and sustainable forestry practices, and to strengthen the sustainable management of coastal 'blue forests' from the perspectives of hazard risk reduction, ICM application, and livelihoods.

The Pacific Ridge to Reef programme embraces the 'doing is seeing the need' philosophy adopted by the IWRM project via the promotion of pilot activities aimed at generating local and national support for integrated Ridge to Reef and Community to Cabinet approaches and to establish linkages, synergies and mechanisms for learning exchange, particularly between and among community leaders and project stakeholders.

Pilot activities will also develop local experience in linking IWRM to coastal area management and will stimulate cross-sectoral participation in the planning of coordinated investments in land, forest, water and coastal management in the participating countries.

The related and linked national STAR projects will deliver the targets of the overall programme relating to strategic objectives of the GEF biodiversity, climate change mitigation and adaptation, land degradation, and sustainable forestry management focal areas.

5. LESSONS FROM INTEGRATION

**“People in Honiara are becoming more aware of the importance of water quality”
Kim Irofufuli**

Capacity building in water safety planning through the Water Safety Sub-Committee

By Isaac Lekelalu, IWRM Project Manager

Honiara City currently faces a serious water dilemma. Population increase coupled with source pollution is leading to frequent contamination and limitation of the town's water supply. At the end of 2012, the IWRM Project Management Unit (PMU) established a sub-committee to look into Water Safety Planning (WSP) for Honiara City. A Water Safety Sub-Committee (WSSC) was established and trained to perform risk assessments to guide the development of the Honiara Water Safety Plan and address

some of their pressing water issues.

This was a timely intervention, as Ms Kim Irofufuli of the Environmental Health Division said, “People in Honiara are becoming aware of the importance of water quality. They do not realize that if the water is interfered with in any way (such as illegal connections) then water quality is compromised”. The WSSC team includes two women and seven men, senior staff from the Ministry of Health & Medical Services, the Environmental Health Divisions of Honiara City Council & Guadalcanal Province, the Public Health Lab, the Solomon Islands Water Authority (SIWA) and the IWRM PMU.

After confirming the WSSC, the PMU ran a series of meetings and workshops to introduce the WSP concept and the approach needed to carry out the activities. The aim of the workshops and meetings was to familiarise the WSSC with each component of the water supply system and how to assess the possible hazards and associated risks. Through practical fieldwork, members documented what they knew about the status of the water supply, the hazards and risks under current supply conditions and the need for improvement(s).

The WSP is a new approach where we are observing the system and preparing plans to avoid serious contamination situations. It was an excellent way to get members from different government agencies physically involved in observing the water catchment and learning the theory behind WSP in order to understand and appreciate the requirements of the water resource system as a whole. Mr. David Hoota said, “These activities increased my knowledge of our water supply systems and networks and their limitations. I now know how our work is linked to the overall improvement of water supply quality and water safety approach in the country”.

After completing the workshops, the WSSC had gained knowledge and basic experience on how to organise and carry out the hazards & risks assessments. The activities completed by the team enabled the Solomon Water to proceed with the working draft WSP document and priority areas to implement once funding is secured

Ms Kim Irofufuli commented at the completion of the activities, “These have helped my understanding of the water supply process. Seeing the results and the coordinated effort of the stakeholders to improve Honiara's water supply has made me more confident that the water we as consumers receive in our homes is becoming safer to drink”

It was important to identify and appoint a Water Safety Sub-Committee as a first step toward Water Safety Planning. The team has expanded now to involve staff from Solomon Water who are directly involved in the water supply distribution and water quality monitoring sections. They have now reached a stage whereby the WSSC received support from the General Manager of Solomon Water to proceed with the Honiara Water Safety Plan by prioritizing risks and costs to implement tasks under the plan.

After compiling the draft Honiara Water Safety Plan the Solomon Water team said, “Dealing with lack of resources; in many cases, we found that we knew what should happen, but also knew that this was impractical. We have tried to focus on practical and implementable actions. The work of the WSSC helped us identify these. As time goes on, these actions can be revised to a more 'ideal' situation”.

Having attended a WSP workshop prior to project implementation I felt confident to lead the team and possessed the initiative to start. I also felt that the WSSC, if endorsed by the Solomon Water Management, would be a first of its kind. As the IWRM Project Manager and motivator of the process I am proud and happy that it has been such a successful capacity building exercise.

Exploring Innovative options for Catchment management

By Isaac Lekelalu, IWRM Project Manager



A local species of mantis recorded through the biodiversity assessment

When the IWRM Project started there was no committee or group to organise the development or management of the Kovi/Kongulai Catchment. There was a trusteeship who received money from lease agreements but they did not undertake any works on the ground or develop management strategies. To inspire new thinking on how to manage the catchment and see its ecological value as a potential benefit the IWRM with the communities developed an eco-tourism plan for the Kovi/Kongulai Catchment.

The IWRM Project began to liaise with the community through the two chiefs of Kongulai and Kovi. Through their role as community representatives the chiefs were able to improve the projects understanding of the community's needs and incorporate their traditional knowledge into the project. The chiefs also facilitate community consultations and workshops with the IWRM creating a two-way street of information and understanding.

Mr. Kalisto Ngao was appointed as a casual staff member to operate the hydrological installations in the catchment. His appointment increased community involvement in the project and improved peoples understanding and ownership of the technical aspects of catchment management. Mr Ngao goes out each week to take readings and reports to the IWRM project office. These data are used to monitor the Kovi stream's water level and flow behaviour. During other catchment investigations and assessments, members of the community went out and assisted consultants to undertake biodiversity, water quality and health surveys.

Through their involvement in the surveys, community members gained experience in survey techniques, technical knowledge about their water catchment and how we can impact upon it. Participants in turn provided the project with extensive and essential traditional knowledge about the ecology and biodiversity of the area. People are now starting to understand the value of the natural assets in their area. As Mr. Peter Pukuvati said, "I used to see the insects and everything as creatures of no value. When I saw the results of the bio-diversity survey I see now that they are integral parts of the environment and are valuable for themselves".

From the assessment of what is actually in the catchment the community has become interested in the idea of an eco-tourism plan as they now recognise the richness of their environment and how this might be interesting to other people. Through partnership with IUCN the project secured funding from the Kiedanrem Nature Conservation Fund of Japan who funded the development of the Kovi/Kongulai eco-tourism plan. Currently tourists can come to the area and pay a local person to be their guide however there is no formal mechanism for this and no management plan, the eco-tourism plan seeks to formalise all these activities so they can be limited and monitored.

"I am currently involved in another association that links culture and the environment from a traditional context and I see this as the next step for our catchment, eco-tourism could be the idea to venture into", said Chief Primo Pukukesa, when asked about the significance of moving toward eco-tourism. The community and IWRM Project hope this will be an example for other communities to explore options for sustainable financing to take care of their catchments and generate money for their communities. By venturing into eco-tourism the catchment can be preserved and the community will have some incentive to manage and look after their land and water resources.

The eco-tourism plan was completed through local consultation and will now be used to leverage additional funding from other line government ministries and donors to support its implementation. These interventions include camping, bushwalks along the streams, and caves in which was found some early cave paintings. Further works need to be undertaken to identify the cultural value of the area, in particular the newly discovered cave painting and locations of cultural importance for preservation purposes.

Through the development of the plan I have realised the importance of learning from community what their aspirations are for their area and together discovering ways to use the unique biodiversity to the advantage of both the environment and the communities livelihoods.

6. THE GEF PACIFIC RIDGE TO REEF PROGRAMME

The GEF Pacific Ridge to Reef (R2R) Programme was developed to guide the strategic investment of GEF grant and national funding in actions aimed at achieving the sustainable development of Pacific SIDS within a truly integrated environmental and natural resource management framework.

A GEF Multi-Focal Area Approach

Initiatives of the R2R programme aim to deliver tangible and quantifiable global environmental benefits by focusing on a more cross-cutting approach to water, land and coastal management that captures the complementarities among the following GEF focal areas



A Multi-GEF Agency Approach

The GEF Pacific Ridge to Reef Programme is a multi-agency initiative involving the United Nations Development Programme (UNDP), the United Nations Food and Agriculture Organization (FAO), and the United Nations Environment Programme (UNEP) as GEF implementing agencies. Coordination support is provided by the Pacific Community (SPC), a regional intergovernmental organisation that works with Pacific Nations across a wide range of areas relevant to programme implementation, including water resource management, geoscience for development, public health, forestry, fisheries, disaster management, youth, gender and culture.

R2R Programme Goal and Components

The goal of the GEF R2R programme is “to maintain and enhance Pacific Island countries’ ecosystem goods and services (provisioning, regulating, supporting and cultural) through integrated approaches to land, water, forest, biodiversity and coastal management that contribute to poverty reduction, sustainable livelihoods and climate resilience”. Programme activities are organised under the following components:



GEF R2R STAR Projects

Significantly, the programme involves the execution of 13 GEF R2R STAR1 projects which address national priorities and development needs while delivering global environmental benefits in line with the abovementioned GEF focal area strategies.

These UNDP, UNEP and FAO implemented projects are executed nationally on a bilateral basis in partnership with local stakeholders. To ensure cohesion, complementarity and efficiency of GEF investments under the R2R programme, each GEF R2R STAR project has been provided US\$175,000 of International Waters (IW) funding in addition to their national STAR allocations.

The intent of this IW funding increment is to enable effective linkages with the GEF International Waters R2R project, the adoption of integrated approaches aimed at addressing critical water-related issues, and intra-regional capacity building and knowledge sharing.

GEF International Waters R2R Project

The operation of the R2R programme is supported in areas of science-based planning, human capital development, policy and strategic planning, results-based management, and knowledge sharing through the International Waters R2R project which is executed regionally by the Pacific Community. R2R pilot projects, to be implemented through the R2R IW project, are designed to strengthen R2R integration by establishing synergies among the work of the various sector agencies and the GEF R2R STAR Projects, between governments and communities, and civil society and the private sector.

Programme Coordinating Unit

The Programme Coordinating Unit (PCU), hosted by the Pacific Community's Geoscience Division in the Fiji Islands, is tasked with the provision of technical, operational, reporting and monitoring support as requested by the participating Pacific Island Countries.

The PCU also facilitates the consolidation and sharing of sectoral knowledge and expertise to support the uptake of best-practice management approaches in policy-making and planning. Led by the Regional Programme Coordinator, the PCU possesses multidisciplinary expertise, including administration and financial management officers, to support programme coordination.

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The Global Environment Facility's System for the Transparent Allocation of Resources (STAR)

7. GEF PACIFIC INTERNATIONAL WATERS R2R PROJECT

This regional project will support 14 Pacific Island Countries in the development of “Ridge to Reef” and “Community to Cabinet” approaches designed to guide the integration of water, land, forest and coastal management required to fashion sustainable futures for island communities. The project also aims to address the recent high-level recognition and calls for results-based approaches to the management of development assistance programmes and projects, and will provide support in areas of coordination, capacity building, technical assistance, and monitoring and evaluation for the operation of the GEF Pacific Ridge to Reef Programme. Components and outcomes of this programme are:

<p>Component 1: National Demonstrations to Support R2R ICM/IWRM Approaches for Island Resilience and Sustainability</p> <ul style="list-style-type: none"> • Successful pilot projects testing innovative solutions involving linking ICM, IWRM and climate change adaptation • National diagnostic analyses for ICM conducted for prioritizing and scaling-up key ICM/IWRM reforms and investments • Community leader roundtable networks established for strengthened ‘community to cabinet’ ICM/IWRM
<p>Component 2: Island-based Investments in Human Capital and Knowledge to Strengthen National and Local Capacities for R2R ICM/IWRM approaches</p> <ul style="list-style-type: none"> • National and local capacity for ICM and IWRM implementation built to enable best practice in integrated land, water, forest and coastal management and CC adaptation • PIC knowledge on climate variability, coastal area planning in DRM, integrating ‘blue forest’ and coastal livelihoods consolidated and shared to support evidence-based coastal and marine spatial planning • Incentive structures for retention of local ‘Ridge to Reef’ expertise and inter-governmental dialogue on human resource needs for ICM/IWRM initiated
<p>Component 3: Mainstreaming of R2R ICM/IWRM Approaches into National Development Planning</p> <ul style="list-style-type: none"> • National and regional strategic action frameworks for ICM/IWRM endorsed nationally and regionally • Coordinated approaches for R2R integrated land, water, forest and coastal management and CC adaptation achieved in 14 PICs • Physical, natural, human and social capital built to strengthen island resilience to current and emerging anthropogenic threats and climate extremes
<p>Component 4: Regional and National ‘Ridge to Reef’ Indicators for Reporting, Monitoring, Adaptive Management and Knowledge Management</p> <ul style="list-style-type: none"> • National and regional formulation and adoption of integrated and simplified results frameworks for integrated multi-focal area projects • National and regional platforms for managing information and sharing of best practices and lessons learned in R2R established
<p>Component 5 - Ridge-to-Reef Regional and National Coordination</p> <ul style="list-style-type: none"> • 5.1 Effective program coordination of national and regional R2R projects

R2R pilot projects, to be implemented through the R2R IW project, are designed to strengthen R2R integration by establishing synergies among the work of the various sector agencies, between governments and communities, and civil society and the private sector. The following pages present the results framework for Solomon Island’s IW pilot project.

INFORMATION BOX

GEF Agency: UNDP
 Regional Executing Agency: SPC
 National Lead Agency: MECCDMM
 Funding Source: GEF Trust Fund
 GEF Focal Area: International Waters

R2R IW PILOT RESULTS FRAMEWORK

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
Monitoring Programme for pollution and nutrients entering Honiara Adjacent Coastal water established	1.1 Honiara Adjacent Coastal Water Sampling methodology, analysis and reporting process operational	Baseline established and published and annual State of the Honiara Coast published Demonstrable use of best practices in planning and implementation	No coastal waters sampling and reporting programme.	Best practice approaches to coastal waters management and stress reduction measures captured, documented and communicated nationally	Catalogue of best practice approaches and measures Communications on best practices published and syndicated	Available best practices in Solomon Islands or regionally
	1.2 Baseline pollution and nutrient loads entering Honiara Adjacent Coastal water established	Baseline established and published	No baselines available	Baseline established and form basis of annual reporting of improvement	Annually published State of the Honiara Coast	Ability to maintain planned sampling, analysis and reporting Available resources to implement activities
	1.3 Annual State of the Honiara Coastal Waters reporting framework institutionalised.	Extent and continuity of the samples collected and analysed Extent of uptake of coastal waters monitoring plan.	No public reporting of levels and impacts of pollution and nutrient discharge.	State of the Honiara Coastal Waters prepared and published annually	Published State of the Honiara Coastal Waters	Available resources to undertake Preparation and Publication Willingness to release data to the public

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
Pollution and Nutrient Sources and environmental impact identified and Management Measures Recommended	2.1 Primary pollution and nutrient sources defined and quantified	Coastal Waters Pollution and Nutrient discharge levels reported.	Limited specificity of sources save obvious disposal of untreated waste into rivers, creeks and coastal waters	Primary Pollutant and Nutrient and pathogen sources identified, quantified and held to account	Published State of the Honiara Coastal Waters	Available resources to undertake Preparation and Publication Willingness to release data to the public
	2.2 Impact on coastal environment assessed	Environmental Impact Assessment published	No assessment of Honiara coastal environment available	Environmental Impact reported and Government, Business and general public aware of Impacts	Published EIA	Available resources to undertake Preparation and Publication Willingness to release report to the public
	2.3 Integrated Honiara Coastal Management Plan	Government endorsed Integrated Honiara Coastal Management Plan	No Honiara Coastal Management Plan	Honiara Coastal Management Plan operationalised	Annually published State of the Honiara Coast	Availability of resources and expertise to undertake the EIA

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
Institutional and Civil Society awareness and capacity for action established.	3.1 Increased active community awareness of waste management issues and mobilised for behavioural change to waste disposal.	Increase in target population with applied understanding of sustainable waste management. % increase	Limited awareness of environmentally safe waste disposal systems	Proportion of target community members with awareness of and technical skills to successfully implement environmentally safe waste disposal systems 25% through innovative participatory techniques	Consultation meeting and activity reports, training workshop outputs including details of trained trainers and school based interviews	Awareness and capacity building materials are sufficiently well designed to engage community members and resource users Continuity of participation of target audience in awareness raising events Willingness schools and students to participate
	3.2 Enhanced cross-sectoral remediation action through partnerships with government, civil society and the private sector.	Number of Partnerships formalised	No existing partnerships	Established and functional partnerships resulting in improved waste disposal in Honiara	Annually published State of the Honiara Coast	Willingness of the sectors to cooperate and maintain improvements.
	3.3 Environmental and public health safeguarded via targeted reductions in nutrient and pathogen contamination of coastal areas	% Reduction in nutrient and pathogen contamination of Honiara coastal area	No control of nutrient and pathogen contamination	Measurable reduction in environmental stress to Honiara coastal area	Annually published State of the Honiara Coast	Ability to maintain planned sampling, analysis and reporting Available resources to implement activities



The GEF unites 182 countries in partnership with international institutions, non-governmental organizations (NGOs), and the private sector to address global environmental issues while supporting national sustainable development initiatives.

www.thegef.org



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www.spc.int



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www.undp.org



UNEP is the leading global environmental authority that sets the environmental agenda and promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system.

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FAO has 194 Member Nations working to achieve food security for all, to make sure people have a regular access to enough high-quality food to lead active and healthy lives.

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